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Dominion Steel Corporation

Limited

A Brief Account of its Coal and Steel Properties

Statement and Maps issued under the authority of the President of the Dominion Steel Corporation, Limited, and of its Subsidiary Companies.

February, 1912

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Dominion Steel Corporation, Limited

MEMORANDUM RESPECTING THE SUBSIDIARY COMPANIES,
2nd FEBRUARY, 1912

The Corporation owns practically the entire Common stock of the
Dominion Coal Company, Limited,
Dominion Iron & Steel Company, Limited, and
Cumberland Railway & Coal Company,
and these enterprises are now carried on under one administration, the Cumberland Company's property being operated under a lease to the Dominion Coal Company.

I. COAL PROPERTIES.

The coal fields of Nova Scotia contain the only coal of commercial value known to exist in Canada east of the Province of Alberta. Owing to their geographical position and to the facilities for transportation by water, the Nova Scotia collieries have a strong hold on the coal trade of Eastern Canada as far as Montreal. This market takes all the coal which the collieries can now supply, and the demand grows faster than the production.

The chief coal fields in Nova Scotia are:

1. The Sydney field in Cape Breton.
2. The Cumberland field in Cumberland County.
3. The Pictou field in Pictou County.
4. The Inverness field in Cape Breton.

There are smaller deposits at other points in Cape Breton.

Of these the first named, the Sydney field, is by far the most important, and among the rest the Cumberland field comes next in extent. The **Dominion Coal Company** holds a large part of the coal areas in these two fields, and its holdings constitute a large percentage of the best and most cheaply mined coal in Nova Scotia. The quantity on its areas is estimated at over 5,000,000,000 tons; for all practical purposes the supply is unlimited. Its Cape Breton mines are within a few miles of the safe and commodious harbors of Sydney and Louisburg, where ships of the largest size are loaded. The Cumberland mines are about five miles from Springhill Junction, whence coal is shipped to Amherst, Moncton and other places by rail; twenty-seven miles from Parrsboro, at the head of the Bay of Fundy, and thirty-six miles from Wallace, a port on waters communicating with the Gulf of St. Lawrence, where it is intended to establish a shipping pier for coal for Montreal. The collieries are therefore well placed for the cheap transportation of coal to the market.

In the Sydney field the coal lies in seams of great regularity and continuity, at a slight inclination from the horizontal; they are 4 to 7 or 8 feet in thickness, with good roofs and floors. In Cumberland and Pictou the seams have more inclination, and at Springhill those now worked are thicker than in Cape Breton.

The Nova Scotia coals are all bituminous, containing a fairly high percentage of volatile matter. They are well known as good steam and coking coals.

The chief seams on the properties of the DOMINION COAL COMPANY are as follows:

GLACE BAY DISTRICT.

The HUB SEAM; average thickness 9 ft. 0 in. On this seam there is the "Hub" or No. 7 colliery; it has over 10,000,000 tons of workable coal tributary to it, with a normal output of 800 tons daily.

THE HARBOR SEAM; average thickness 6 ft. 0 in. On this seam are No. 8 (International) and No. 9 collieries. They command over 20,000,000 tons of workable coal, and have an output of 2,200 tons daily.

The PHELAN SEAM; average thickness 7 ft. 6 in.; estimated workable coal on land areas 19,000,000 tons; on the submarine the quantity is unlimited. On this seam there are collieries No. 1 (Dominion), No. 2, No. 3, No. 4 (Caledonia), No. 5 (Reserve) and No. 6. Their output is 9,000 tons daily. The coal tributary to Nos. 3 and 5 is approaching exhaustion.

The EMERY SEAM; average thickness 5 ft. 0 in.; estimated contents over 100,000,000 tons. On this seam one colliery has so far been opened, No. 10. All the collieries on the Phelan Seam, which overlies the Emery, can, when necessary, be extended to this seam.

Other seams underlie the foregoing in the Glace Bay district, among them the Gardiner and Tracy, which have been worked, and others which have not been opened up.

LINGAN DISTRICT.

The **VICTORIA SEAM**; average thickness 6 ft. 6 in.; estimated contents over 250,000,000 tons of coal which can be mined. On this seam there are two new collieries, Nos. 12 and 14, in full production, which have still to receive a good deal of their permanent equipment. They are designed to produce 1,200 tons each per day.

The **LINGAN SEAM**; average thickness 6 ft. 0 in.; estimated contents over 250,000,000 tons of coal which can be mined. On this seam two collieries, Nos. 15 and 16, are nearing completion, and another, No. 17, will shortly be begun. All three are designed for an output of 1,200 tons per day each.

There are other seams on the Company's areas in this district, of known importance and value, not at present worked, and the Lingan areas, as a whole, contain the largest and best body of coal in Nova Scotia, so placed that it can be mined and shipped at a moderate cost.

MORIEN DISTRICT.

In this district there are seams on the areas leased from the Cumberland Company as follows:

The **UPPER SEAM**; average thickness 6 ft. 0 in.; estimated contents 4,500,000 tons of coal that can be mined.

The **FOUR FOOT SEAM**; average thickness 4 ft. 0 in.; estimated contents 5,000,000 tons of coal that can be mined.

The **TRACY SEAM**; average thickness 5 ft. 1 in.; estimated contents over 35,000,000 tons of workable coal.

On the Upper Seam two collieries are under construction, of a capacity of 750 tons each daily.

The Company has areas in this district, adjoining the Cumberland Lease, containing the Blockhouse, the Gowrie and other seams, which have been tested by the workings of other companies and found to contain good commercial coal. The quantity is practically unlimited.

NORTH SYDNEY DISTRICT.

On the large areas north of Sydney Harbor owned by the Company, on which as yet no collieries have been opened by it, there are important and valuable seams, including those worked for many years by the Nova Scotia Steel and Coal Company, Limited, on adjoining areas.

CUMBERLAND PROPERTY.

The Company holds 180 square miles of areas in Cumberland County. There are two collieries at Springhill: No. 2, on the WEST SEAM, average thickness 9 ft. 0 in. and No. 3, on the NORTH SEAM, average thickness 6 to 10 ft. The output of these collieries is at present about 1,500 tons daily. Preparations are being made to open a third colliery near Springhill.

The DOMINION COAL COMPANY, LIMITED, thus has:

12 producing collieries in Cape Breton, two of which have just been brought to that stage;
2 producing collieries in Springhill;
2 collieries in the Lingan district which will be completed in 1913,
2 collieries under way in the Morien district, which will be producing a partial output in 1913, and completed in 1914, and
2 new collieries will shortly be begun.

These will make 20 collieries in all. The output in 1911 was 4,251,063 tons, in 1912 it will be over 4,500,000 tons.

The Company owns the railways necessary to carry its coal to tide-water or to connecting railways; a description of these properties is hereafter given. It has two loading piers on Sydney Harbor and a third under construction. On Louisburg Harbor there are a low level pier for small vessels and also a high level loading pier. All piers used for large steamers are equipped for the rapid and economical loading of coal, and the largest vessels now in use can lie alongside.

At Parrsboro there is a shipping pier of moderate capacity for shipments to St. John, N. B., and elsewhere. A pier will be built in the summer of 1912 at Wallace, whence coal from the Springhill collieries will be carried to Montreal.

In addition the Company has established an efficient and economical system of transportation by water. It owns five steamers constituting the "Black Diamond Line," but the work is done chiefly by large steamers built for the Company's trade on long time-charters. It has modern plants for discharging coal at Montreal, Quebec, St. John and elsewhere.

II. RAILWAYS.

The following railways are entirely owned by the Companies. While constructed primarily for the transportation of coal, they are built and equipped as standard roads and are engaged in the carriage of passengers and general freight as well:

The **Sydney & Louisburg Railway**, from Sydney to Louisburg, with branches to Donkin, New Waterford and Ball's Creek, all in Cape Breton, 65½ miles of main line laid with 80 lb. rails, and 44 miles of sidings. Its equipment consists of 27 locomotives, 7 passenger cars, [illegible] freight cars and 1,470 coal and other cars. Many of the cars used for coal are large steel cars of the latest type.

This railway earned in 1911, apart from the carriage of coal, $182,603.80, and the property with its terminals and equipment is valued at $3,500,000 to $4,000,000. It comes under the general trust deed covering the collieries and other property of the Dominion Coal Company, given to secure its First Mortgage Bonds, but is otherwise unencumbered.

The **Cumberland Railway**, from Springhill Junction on the Intercolonial Railway to the town of Parrsboro, at the head of the Bay of Fundy, has 44½ miles of track, laid with 80, 67 and 56 lb. rails, and is equipped with 6 locomotives, 6 passenger cars, 32 freight cars and 498 coal and other cars. The value of this railway property is estimated at $1,000,000 to $1,200,000. It comes under the general mortgage covering the collieries and other property of the Company, as security for its First Mortgage Bonds, but is otherwise unencumbered.

The **Dominion Iron & Steel Company** has its own railway system, with 36 miles of standard track and 3 miles of narrow gauge track, 18 standard and seven narrow gauge locomotives, and 388 cars, representing an investment of about $800,000. Its service is practically confined to the operations of the plant.

III. IRON ORE PROPERTY.

The Dominion Iron & Steel Company, Limited, owns a practically unlimited supply of iron ore of good quality at its Wabana Mines on Bell Island, Newfoundland. The ore is a silicious hematite, 50 to 52 per cent. iron, which can be cheaply mined and loaded on vessels of the largest size at piers close to the mines.

There are three seams of ore, respectively 7, 8 and 9 feet in thickness, lying at an angle of 10°. The lowest seam outcrops on the island for a distance of 19,000 feet, and four slopes have been driven into it, for a maximum distance of 2,300 feet. This seam is also opened at a point 10,000 feet to the dip from the outcrop, from a slope on the middle seam, and at this point is found to be larger and of better quality than near the surface.

The ore which may be regarded as proved, taking only ore that can be mined, exceeds 110,000,000 tons, but there are further submarine areas which have not been reached, on which there is no reasonable doubt the same ore beds will be found. These areas in that case contain much more ore than that already known.

The conditions for mining and shipping are favourable; transportation to Sydney is under 1s. 0d. per ton, and the freight to the nearer European ports would be 4s. 6d. to 5s. 6d. per ton.

The mines are equipped for an output of 1,000,000 tons per annum, which can be increased at a reasonable cost.

An inspection of the Wabana property was made in 1909 by Mr. Frank Merricks, of Merricks, Crane & Co., Mining Engineers, London, who estimated the ore available at 108,000,000 tons. He concludes his report with these words:

> "After a careful and thorough examination of the property, I have no hesitation in stating that it is one of exceptional value. Not only does it contain a very large quantity of ore of good quality, but the thickness and regularity of the deposits, combined with natural facilities for working, handling and shipping, enable the ore to be mined and delivered on board at a very low cost. The cost of mining at present and within any reasonable time is likely to remain so low that the ore can be mined to yield a handsome profit either by converting it into pig-iron at the works at Sydney, or by selling it in the open market."

An examination of the property was made in October, 1911, by Mr. M. S. Stutchbury, A.R.S.M., of London. He places the PROVED ORE at 82,150,000 tons, and the PROBABLE ORE at 32,479.000 tons. The following are brief extracts from his report:

> "The ore when mined is in admirable physical condition for direct treatment in the blast furnace.
>
> "The continuous regularity of the deposits has been proved for 19,000 feet in one direction and 10,000 feet in another. . . . The middle seam has been opened by two parallel slopes 10,000 feet in length, proving the unbroken regularity of the beds over this distance. . . . The main ore body shows no signs of diminution in a distance of over 19,000 feet in one direction and over 10,000 feet in another.
>
> "There is every reason to believe the ore grows richer as the seams descend.
>
> "The amount of water is small . . . the roof is good and does not require to be timbered . . . the faults are simple and are of little hindrance.
>
> "The equipment is in good order, well arranged for 135,000 tons monthly. . . . Great credit is due the management for the manner in which the mine is handled. The 'lay-out' is remarkably efficient."

Mr. Stutchbury's conclusion is as follows:

> "The mineral holdings of the Company [on Bell Island] are surrounded by a unique combination of favourable circumstances. The element of speculation adherent to all mining enterprises is in this case largely eliminated, with the result that the mines are in an unassailable position, giving them great value."

IV. LIMESTONE AND DOLOMITE.

The Steel Company has Limestone quarries at Marble Mountain on the Bras d'Or Lake, about fifty-five miles by water from Sydney, and at Ball's Creek, which is ten miles by rail from the plant. A further supply of Limestone is being opened up at Port au Port, in Newfoundland, a distance of about two hundred miles, from which stone will be economically brought by large vessels.

The Dolomite used is procured at George's River, a distance of seventeen miles by rail.

V. IRON AND STEEL PLANT.

The Steel Company's plant is on the shores of the harbour at Sydney, within a few miles of the collieries. It has its own deep-water piers, and every facility for shipment by rail or water. The extent of the plant, which is being greatly enlarged, is hereafter indicated.

Its output has hitherto been confined to pig iron, billets, rails and wire-rods, but a variety of more finished articles, such as bars, rolled sections of various kinds, wire, nails, bolts and nuts, etc., will be added to the Company's products when the new plant is complete. This will enable the Company to reach a wider market, and also to secure a larger profit.

In the distribution of its products, whatever disadvantage the plant may be under as regards shipments to the Northwest Provinces, compared with works situated nearer that part of Canada, is offset by counterbalancing advantages in other markets, as in the Province of Quebec and in Eastern Ontario. As regards the trade of the Maritime Provinces and British Columbia, proximity to the market in the one case and the low cost of transportation by water in the other, give the Sydney plant very decided advantages. In addition, the situation of the plant gives it free access by water to the markets of the world, from which its chief competitors are debarred.

The ultimate success and permanent prosperity of the plant is assured and safeguarded by the consolidation of the ownership of practically unlimited supplies of Ore, of Coal and of Limestone, of good quality and capable of being assembled at Sydney at a very low cost, and by the command of cheap transportation by water for both inland and foreign business.

VI. MARKETS : DELIVERY.

The chief market for the coal mined in Nova Scotia is in Quebec, Montreal and other points in the Province of Quebec; a small portion of the coal for these points is transported by rail during winter, but by far the greater part is shipped up the Gulf and River St. Lawrence during the season of navigation. In 1911 the Nova Scotia Collieries shipped to Montreal, Quebec, Three Rivers and Sorel 1,944,296 gross tons. As previously stated, the demands of this market grow faster than the increase in the production of coal.

The annual consumption of Nova Scotia coal in the Maritime Provinces (Nova Scotia, Prince Edward Island and New Brunswick), inclusive of that which is used for metallurgical purposes, is 2,400,000 tons yearly, and considerable quantities are shipped to Newfoundland and to the New England States.

Of the market for iron and steel, it may be said, speaking broadly, that if all the iron and steel plants in Canada were doubled in capacity, they would only meet the present home consumption, with no provision for the great increase which is going on. The latest statistics attainable show that Canada is producing not more than 54 per cent. of the steel she uses, and about 43 per cent. of the pig iron used for purposes other than the manufacture of steel.

SHIPPING FACILITIES: The accompanying maps show the position of the properties of the Corporation in relation to questions of transportation and the delivery of their products.

It is undoubtedly the ability to deliver coal by water, at the lowest cost, at Montreal and other places in the Province of Quebec, at the chief places in the Maritime Provinces and Newfoundland, and at the nearby ports in the United States, which gives the Collieries controlled by the Corporation their special value. As regards the inland trade of Nova Scotia and New Brunswick, the Springhill Collieries are well situated to supply this market by rail.

Shipments of coal can be made throughout the year, except by the St. Lawrence to Quebec and Montreal; that route is closed in winter.

Steel is generally shipped by rail, but large quantities are carried at low cost by direct steamers from Sydney to the head of Lake Superior, a distance of over 2,300 miles. The rates of transportation by rail from Sydney are not excessive; they are kept in check by the ability of the Companies to ship direct by water during seven months of the year, and by water from Louisburg to St. John or Portland during winter, whence there is a much shorter rail route to the interior. In effect there are three routes to inland points in winter and four during the rest of the year; a very effective protection against excessive transportation charges.

VII. EXTENSIONS AND ADDITIONS.

The extensions of the works now under way, or arranged for, are briefly as follows:

Coal.—On the Dominion Coal Company's property in the Lingan District two collieries recently opened are receiving their permanent equipment, two new collieries are under way, and another will shortly be begun. Two collieries are under way in the Morien District, and a new colliery will be opened at Springhill. All these will require additional railway and shipping facilities, and more equipment of all kinds. On 31st December, 1911, there still remained to be expended on this work $3,250,000, of which a considerable sum will be supplied from earnings. Fuller details are given in a preceding section.

The completion of the work will give the Company twenty collieries in all, of which three are approaching exhaustion. One of the latter can be continued on a seam underlying that which is now mined.

Steel.—The extensions undertaken in the Steel plant are best shown by the following comparative statements:—

PLANT AS IN MAY, 1909.	PLANT WHEN PRESENT WORK IS COMPLETED.
Coke ovens, 1,050 to 1,100 tons daily.	Coke ovens, 1,700 to 1,800 tons daily.
4 blast furnaces. Average working capacity, allowing for relining, 825 tons daily.	6 blast furnaces. Average working capacity, allowing for relining, 1,300 tons daily.
2 15-ton Bessemer converters.	3 15-ton Bessemer converters.
1 200-ton mixer.	1 200-ton mixer, which may be converted into an open hearth furnace.
	2 500-ton mixers, or open hearth furnaces.
10 50-ton open hearth furnaces.	10 50-ton open hearth furnaces.
Power plant, 2,500 k.w.	2 power plants, 6,500 k.w.
Blooming mill.	Blooming mill.
Billet mill.	Billet mill.
Rail mill.	Rail mill.
Rod mill.	Rod mill.
	22 in. Merchant mill.
	12 in. bar and rod mill.
	Wire and nail mills.
	Bolt and nut mills.
Capacity (in steel), 250,000 tons per annum of billets, rails and wire rods.	Capacity (in steel), 400,000 tons of billets, rails, wire rods, bars, rolled sections of various kinds, wire, wire nails, and other products.

The general equipment; railway tracks, locomotives and cars, ore handling plant, lime kilns, hydraulic power, ladles and ladle cars, etc., etc., are being proportionately increased. The estimated cost of the extensions is $5,500,000, of which $3,685,000 had been expended up to 31st December, 1911.

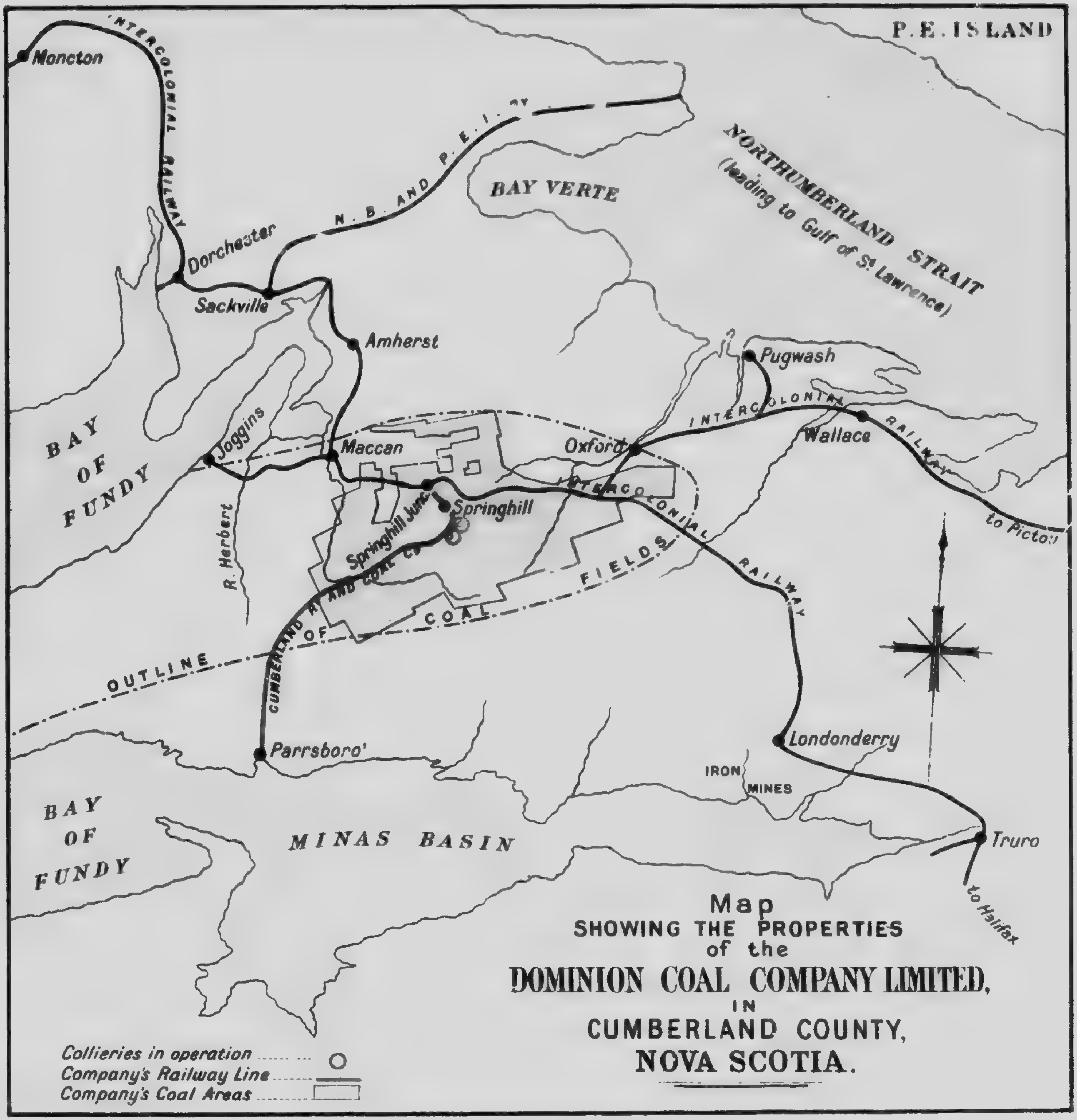
Of the new work mentioned, the coke ovens and power plant are completed, the first of the two new blast furnaces, the two large open hearth furnaces, and the wire and nail mills, are approaching completion, and the other mills, etc., are in various stages of construction. Most of the new plant will, it is hoped, be in operation by midsummer, and the balance before the end of 1912.

The additions to the Steel plant above described will bring the present works up to a well-balanced level, and no further additions of importance will be needed to enable the Company to convert into steel, and finish in marketable form, all the pig iron it can produce.

The possession of such valuable raw materials, and the growth of the Canadian markets, must ultimately lead to a great enlargement of the Company's operations, but the policy of the Board is to complete the plant as now planned, and to develop it to a proper state of efficiency and earning power before undertaking further expansion.

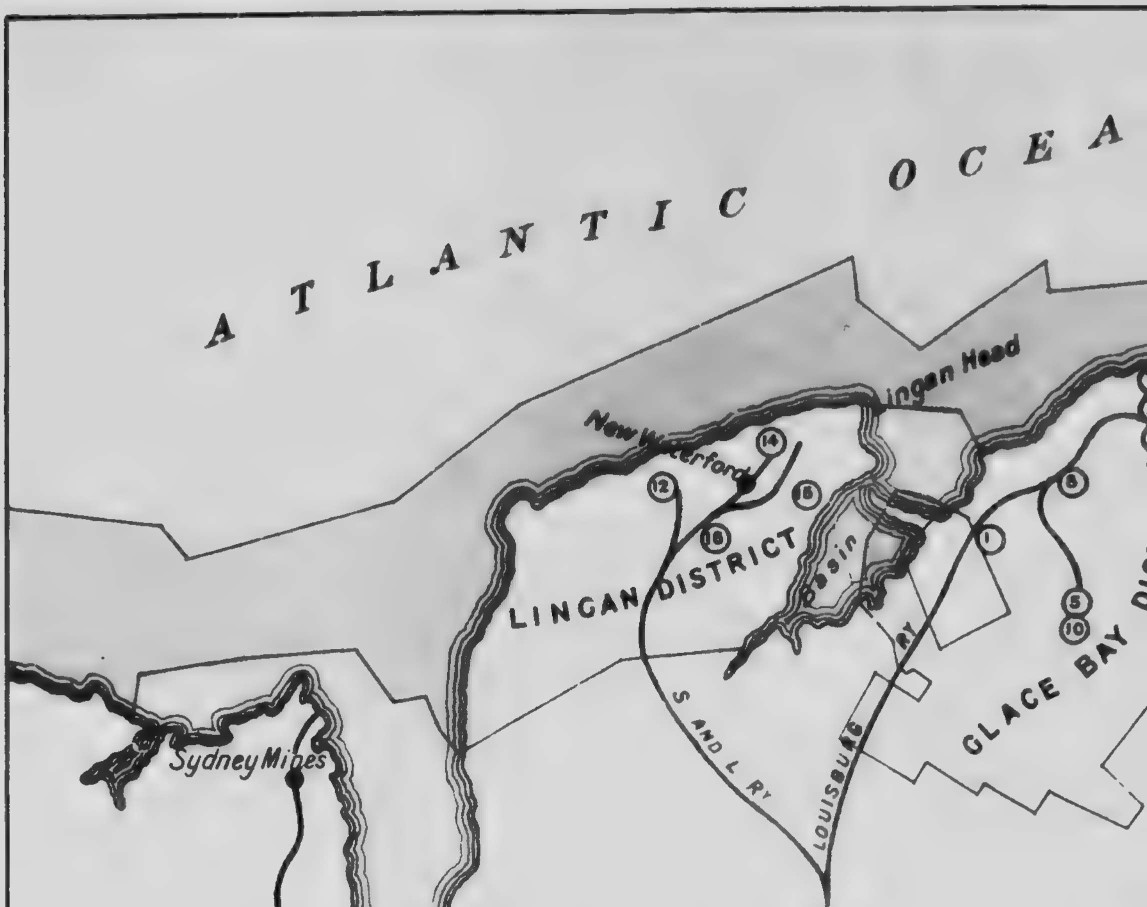
This statement and the accompanying maps are issued under the authority of the President of the Dominion Steel Corporation, Limited, for the information of the holders of the bonds and stocks of the Corporation and its subsidiary Companies.

Montreal, February 2nd, 1912.



Map
SHOWING THE PROPERTIES
of the
DOMINION COAL COMPANY LIMITED,
IN
CUMBERLAND COUNTY,
NOVA SCOTIA.

WATERLOW & SONS LIMITED LONDON WALL, LONDON



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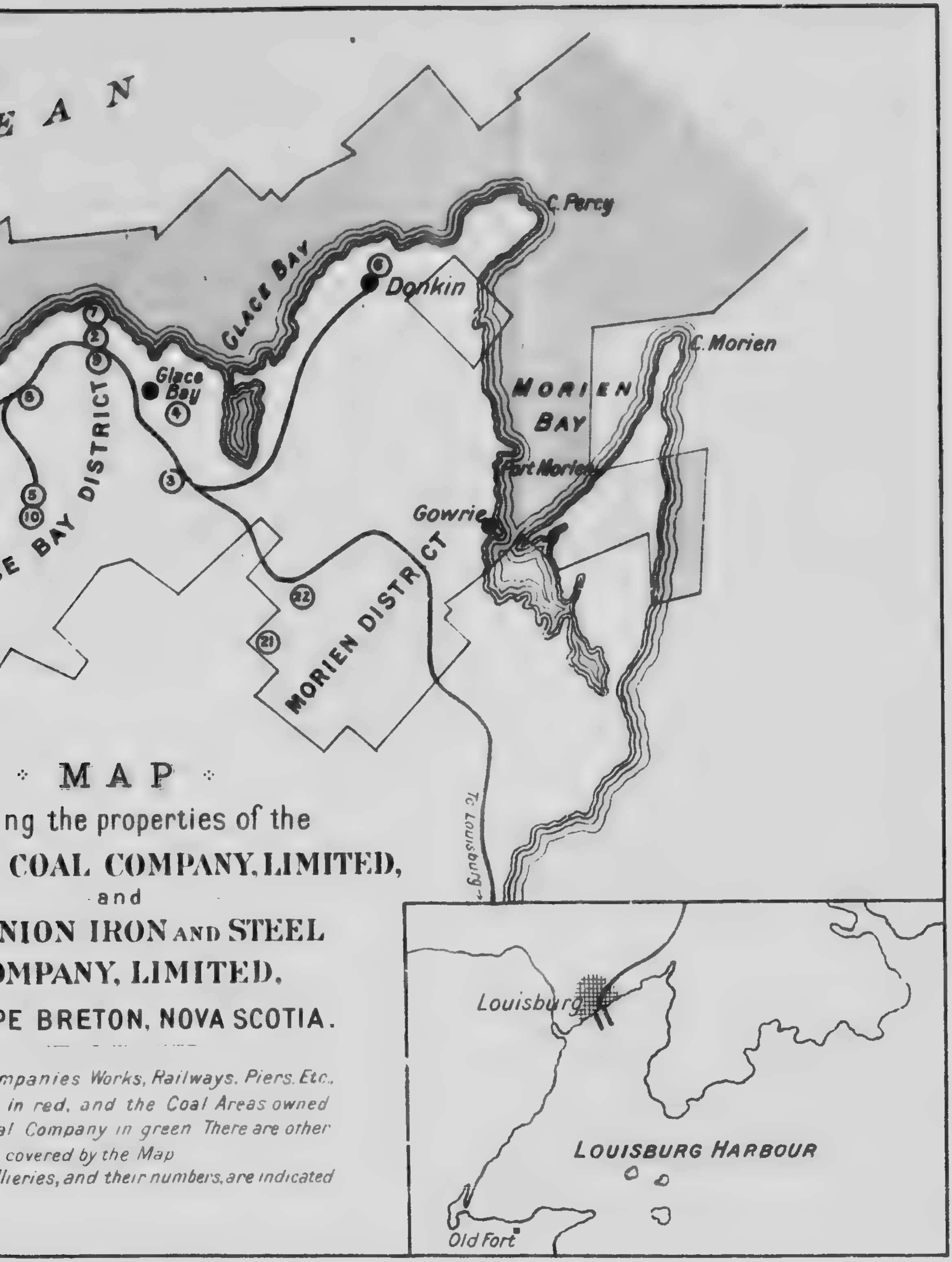

MAP

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COAL COMPANY, LIMITED,

and

NION IRON AND STEEL

OMPANY, LIMITED.

PE BRETON, NOVA SCOTIA.

mpanies Works, Railways. Piers. Etc., in red, and the Coal Areas owned al Company in green There are other covered by the Map llieries, and their numbers, are indicated

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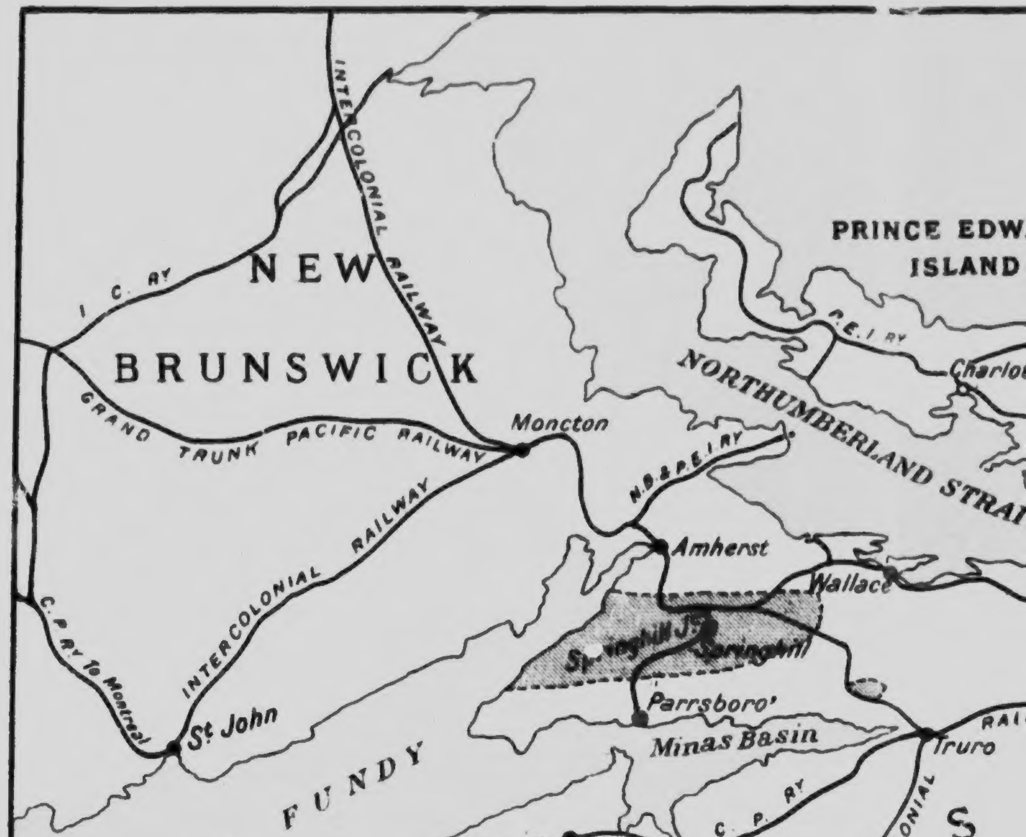
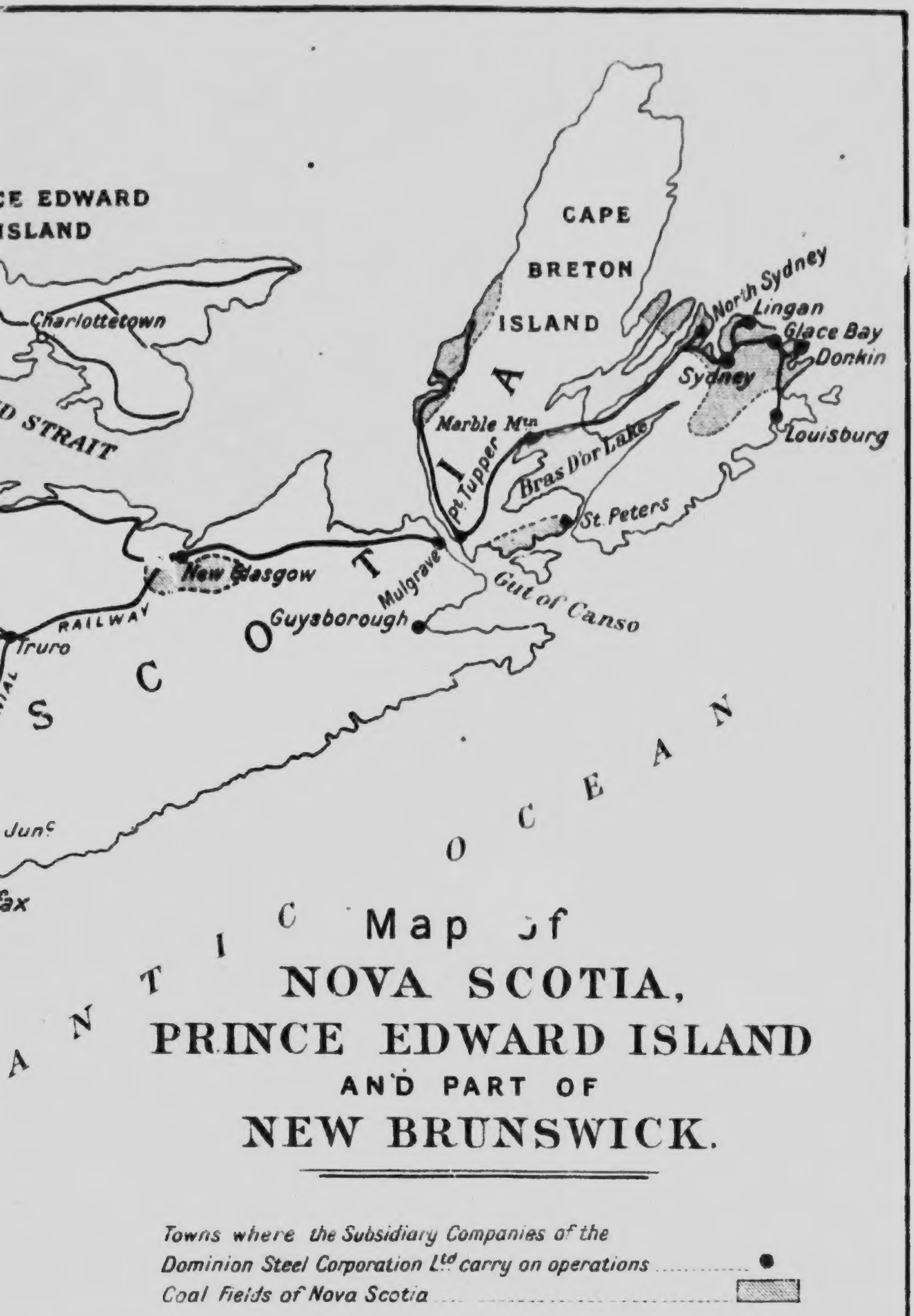


WATERLOW & SONS LIMITED, LOND



Map of
NOVA SCOTIA,
PRINCE EDWARD ISLAND
AND PART OF
NEW BRUNSWICK.

Towns where the Subsidiary Companies of the Dominion Steel Corporation L^td carry on operations .... ●
Coal Fields of Nova Scotia .... ▨

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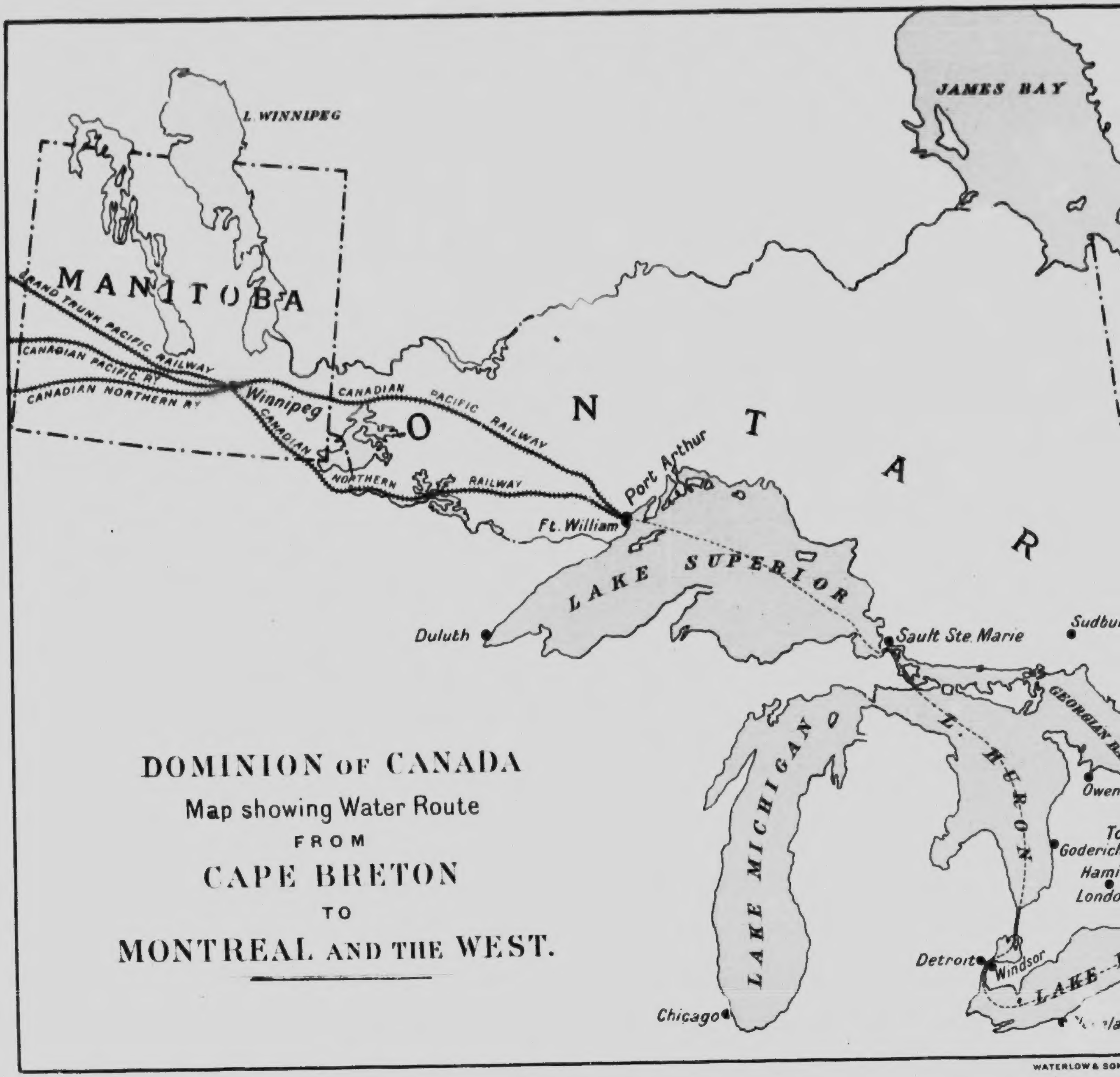
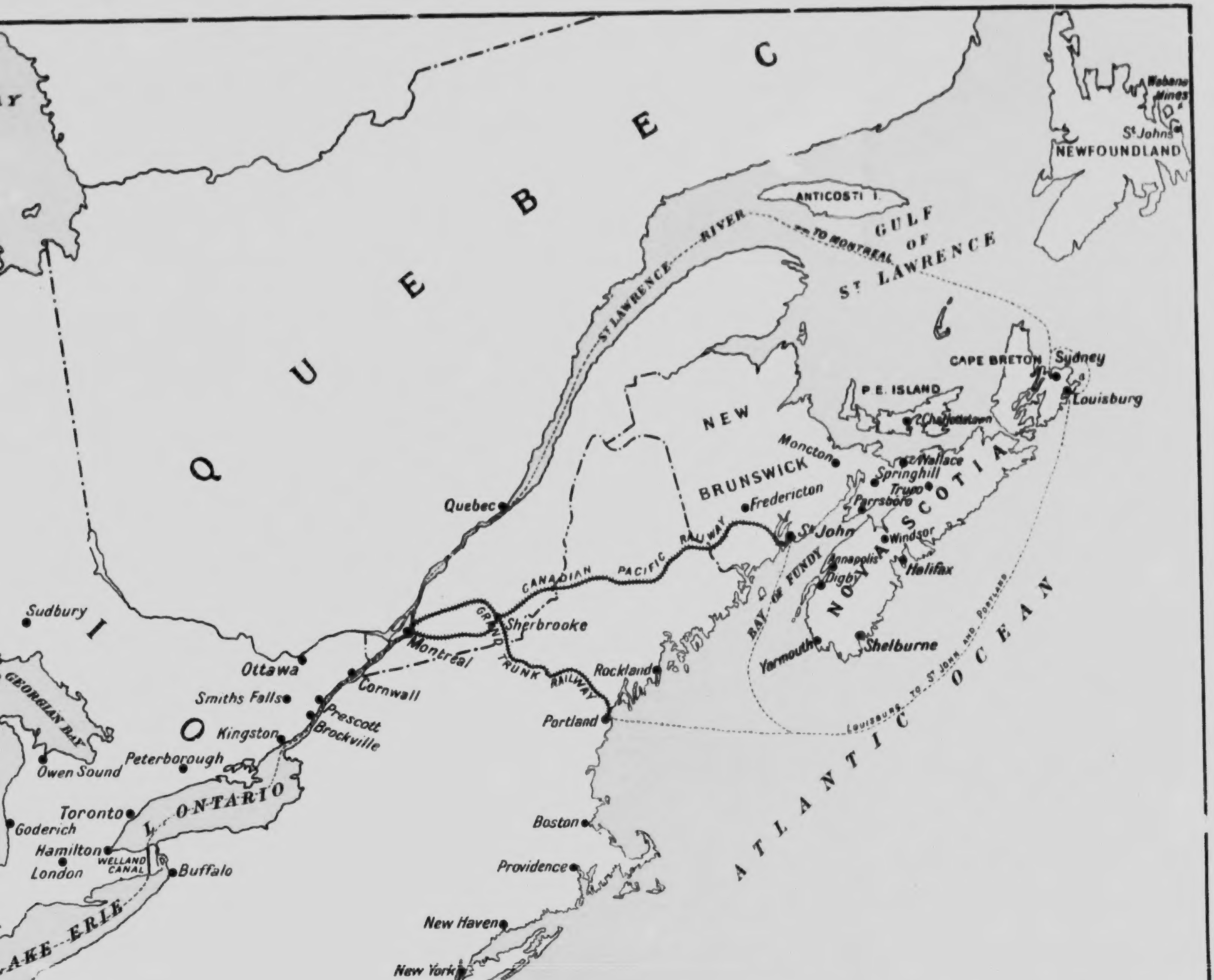


DOMINION OF CANADA

Map showing Water Route
FROM
CAPE BRETON
TO
MONTREAL AND THE WEST.

WATERLOW & SO



ATERLOW & SONS LIMITED, LONDON WALL, LONDON.